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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,629	02/22/2002	Naoki Morita	020028	777.1

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EXAMINER

FRANK, ELLIOT L

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,629

Applicant(s)

MORITA ET AL.

Examiner

Elliot L. Frank

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED FINAL ACTION

Response to Amendment

1. The following FINAL office action is a response to applicant's amendment (A) filed on 16 January 2004.
2. The corrections or explanations presented in response to items 1-3 of the previous office action have been considered and are accepted.
3. Claims 1-3 remain pending in the office action. Claims 1-3 have been amended per the applicant's submission.
4. The following rejections, updated with the current claim language, are maintained from the previous office action. A response to the applicant's arguments for traversal follows these rejections.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 rejected under 35 U.S.C. 103(a) as being unpatentable over Salvo et al. (USPN 6,496,751 B1) in view of Poth (USPN 6,445,959 B1).

The limitations of the aforementioned claims, and the applicable citations in Salvo et al., are as follows:

1. An NC machining assisting system comprising: a plurality of NC machine tools (column 2, line 47-column 3, line 24) [each including NC program generating means and NC program improving and updating means that are connected to a central manager via a network]; actual machining performance information is supplied to the central manager from the respective NC machine tools (column 11, line 52-column 12, line 39); the central manager generates a database on the basis of the collected actual machining performance information and stores the database therein (column 15, lines 36-56); and the NC machine tools are each permitted to retrieve information necessary for machining from the database (column 13, lines 6-18).

Claim 2 includes the same functional requirements as claim 1 with the additional limitation of the performance information being available to an apparatus "other than the NC machine tools". Salvo et al. reads on this requirement at column 14, lines 11-37.

3. An NC machining assisting system as set forth in claim 1 or 2, further comprising the actual machining performance information includes at least one of workpiece information, tool information, cutting condition information, jig information, machine specification information, machining history information, machine operation history information, tool use history information and jig use history information (generally recited at column 8, lines 17-29 with a specific recitation of product quality at column 11, line 52-column 12, line 11).

While Salvo et al. describes a production monitoring and control system generally applicable to a variety of manufacturing tools (column 2, line 66-column 3,

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line 24) with a process updating and enhancing means (column 2, lines 47-65), it does not specifically recite the connection of a program generating means to the manufacturing control system.

Poth, analogous to Salvo et al. in that they are both manufacturing machine control systems (Poth, column 1, lines 4-10), makes obvious this requirement wherein it demonstrates that a network connected program generating means for a numerical control system was well known in the art at the time the invention was made. (Poth, column 1, lines 35-63).

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Arguments

8. Applicant's arguments filed 16 January 2004 have been fully considered but they are not persuasive.

- a. The applicant has argued that the rejection Salvo et al. (USPN 6,496,751 B1) in view of Poth (USPN 6,445,959 B1) does not make obvious the instant invention. The examiner respectfully disagrees.
- b. The applicant has indicated that Salvo et al. fails to disclose an NC machining system comprising: a plurality of NC machine tools each including NC program generating means and NC program improving and updating means that are connected to a central manager via a network.
 1. Salvo et al. has been reasonably interpreted to make obvious this limitation. Per the previously citation in the reference, column 2, line 47-column 3, line 24, Salvo et al. is a process machinery monitoring and management system used to enhance the operations of process machinery. This is not a system that is just used to control one tool.
 2. Salvo et al. does use the example of an extruder to explain the invention, but it also clearly states that the invention is not limited to any type of process machine, and "may comprises (sic) one or more process machines" (column 4, lines 44-55). A multitude of process machines are given as well as an allowance for other such machines.
 3. The examiner has also reasonably interpreted Salvo et al. makes obvious numerical control of the aforementioned process machinery. Further support is found at column 12, line 40-column 13, line 5 wherein Salvo et al. explains that the types of control that may be implemented are not limited to any specific method. Computer

controls, as well as various types of discrete monolithic control, are mentioned. One of ordinary skill in the art at the time the invention was made would have known that NC control would have been an option if the application or tool to be controlled warranted a higher level of sophistication.

4. Finally, the ability for a Numerical controller to interact with a central computer in order to update or download programs was shown to be well known in the art at the time the invention was made via the citation in Poth, column 1, lines 35-63.

- c. The applicant also presents the argument that the combined system fails to read on the requirements of the invention wherein the central manager generates a database on the basis of the collected actual machining performance information and stores the database therein; and the NC machine tools are each permitted to retrieve information necessary for machine from the database.

1. The examiner respectfully disagrees. Salvo et al. discloses a machine terminal that, in addition to controlling a process machine, may analyze process data in order to improve the process (column 13, lines 6-18). This machine is part of a network that also houses a central controller. The central control may archive data files for use by any consumer requiring process data (column 15, lines 36-56).

This information may analyzed for quality and trends to be used for "process variation" (line 44).

2. To offer further support, an example of centrally processed and stored information being provided to a remote machine controller is explained in Salvo at column 15, lines 9-35. Here process variables may be furnished real time to information consumers periodically or on request via any information-providing mode. Also see column 14, lines 10-23, wherein additional communications between a central controller and a machine controller are discussed to achieve enhanced quality of machine output.
- d. In the response to arguments presented in view of claim 1, the examiner believes that the similar arguments in view of claim 2 and multiple dependant claim 3 have also been addressed.
- e. In view of this response, the examiner respectfully maintains that the rejections, as presented, continue to read on the amended claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5,903,474 A – Sadler et al. – Control system

USPN 6,507,765 B1 – Hopkins et al. – Control system

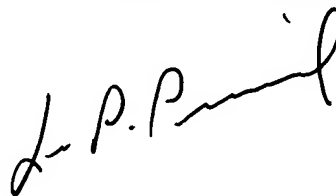
10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elliot L Frank whose telephone number is (703) 305-5442. The examiner can normally be reached on M-F 7-4:30, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P Picard can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5484.



ELF, January 27, 2004

**LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**